ZEPENG (SHAWN) XIAO

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EDUCATION

NEW YORK UNIVERSITY New York, NY
The Courant Institute of Mathematical Sciences
MS in Mathematics in Finance (expected – January 2021)

- ***Current Coursework:*** Mean-variance analysis, equilibrium asset pricing models, arbitrage pricing theory, derivatives evaluation, Black-Scholes theory, Markov Chains, Brownian motion, Stochastic differential equations, forward and backward Kolmogorov equations

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN Champaign, IL
BS in Mathematics and Statistics (August 2016 – May 2019)

- ***Honors:*** Summa Cum Laude with Highest Distinction in Mathematics and Statistics

EXPERIENCE

INVESTMENT BANK OF CHINA MERCHANTS SECURITIES CO. LTD Shenzhen, China
Investment Banking Intern in ABS (June 2018 – August 2018) (Python and Microsoft Excel)

- Processed 50 MB historical data about past payment of loans provided by bond sponsors
- Applied statistical methods to predict key parameters like future prepayment rate and default rate
- Simulated future payment of related loans and cash flow for entire ABS project
- Constructed model to predicted future bonds dividends yield at specific time based on simulations
- Formulated trading structure to balance profits for each side, like bond sponsors, and investors

ACTUARIAL DEPARTMENT OF PICC REINSURANCE CO. LTD Beijing, China
Actuarial Science Intern (May 2017 – August 2017) (Matlab and Microsoft Excel)

- Processed historical claim records, analyzed different factors that may affect claims
- Applied actuarial methods to calculate self-estimation of company's solvency in 2017 and estimation of company's reserves in second quarter of 2017
- Investigated and translated English research paper to improve team's insurance pricing method

PROJECTS

DURHAM UNIVERSITY Online
Quantitative Research: Advanced Portfolio Theories and Models (Matlab)

- Investigated and collected different portfolio management processes and portfolio models
- Implemented portfolio models like Black-Litterman and Kan-and-Zhou model by Matlab
- Applied different models to determine different sets of portfolios
- Monitored performance for each set of portfolios by practical market data between 2001 and 2010
- Analyzed advantage and limitation of each model by evaluating performance

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN Champaign, IL
Regression Analysis: Simulating NBA Match Results and Predicting NBA Playoff Teams (R)

- Processed NBA historical data and determined significant factors that may affect match result
- Applied ridge regression to factors, and built models to simulate results for future games in R
- Predicted playoff teams based on results simulated by Monte-Carlo, which has 87.5% accuracy

Time-Series Analysis: Analyzing and predicting sneaker's price (R)

- Web-scraped and processed historical data for sneaker deals on StockX, like price and time
- Analyzed relationship between price and time and overall trend for price
- Predicted future prices fluctuation based on time series analysis and predicted time when price reach its minimum in the next year in R
- Constructed shiny app including diagrams to visualize analyzing and predicting result

COMPUTER SKILLS/OTHER

Programming Languages: Java (2 Years), Python (4 Years), C++ (2 Years)
Other Software: Microsoft Office, MATLAB, R, Latex
Languages: Mandarin (native), English (fluent)